



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,711	12/30/2003	Martin Brox	1890-0030	2105
7590 07/28/2005				
Maginot, Moore & Beck Bank One Tower Suite 3000 111 Monument Circle Indianapolis, IN 46204			EXAMINER LUU, AN T	
			ART UNIT 2816	PAPER NUMBER

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/748,711	BROX ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	An T. Luu	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15,16,19-22,25,26 and 28-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15,16,20-22,25,26 and 28 is/are allowed.
- 6) ☒ Claim(s) 29-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 29, 30, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by the Li et al reference (U.S. Patent 6,208,183).

Li et al discloses in figure 8 an apparatus comprising a delay device comprising a first delay element (320, 322) and a second delay element (314), wherein the first delay element is configured to generate a first output (CLKout) responsive to a control signal (VLF) and a first input (output of 314 via 318), and wherein the second delay element is configured to generate the first input responsive to an externally generated clock signal (CLKref) and a set signal (outputs of 312) related to the frequency of the externally generated clock signal, a feedback device (308) operably connected to the first delay element and configured to generate a time delayed first output (CLK\*ref and col.11, line 49), a phase difference detection device 302 configured to generate signal responsive to the phase difference between the time delayed first output and the externally generated clock signal, and a frequency detection unit 312 coupled to directly receive the externally generated clock signal, wherein the frequency detection unit configured to generate the set signal responsive to the frequency of the externally generated clock signal as required by claim 29.

Art Unit: 2816

As to claim 30, figure 8 shows the first delay element responsive to a filter control signal from filter 306 which is coupled to the phase detection device.

As to claim 34, figure 8 shows the frequency detection unit 312 operable generating the set signal independent from the first output signal.

As to claim 35, the scope of claim is similar to that of claim 30. Therefore, it is rejected for the same reason set forth above.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 31 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Li et al reference (U.S. Patent 6,208,183) in view of the Lee reference (U.S. Patent 6,373,913).

Li et al discloses all the claimed invention (see the rejection under 102 noted above) except for teaching the delay device comprising a controllably variable capacitor element as required by claim 31.

Lee discloses in figure 6 a delay device comprising a controllably variable capacitor element 145 as required by the claim.

It would have been obvious to one skilled in the art at the time the invention was made to incorporate the teaching of Lee into that of Li et al since Li et al discloses that his invention is not limited by the particular embodiments or implementations described in his specification.

Art Unit: 2816

A skilled artisan in the art would be motivated to implement Lee's teaching since his delay line has a shorter the locking time compared to the conventional case.

As to claim 36, the scope of claim is similar to that of claim 31. Therefore, it is rejected for the same reason set forth above.

5. Claims 32-33 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Li et al reference (U.S. Patent 6,208,183) in view of the Heightley reference (U.S. Patent 6,469,559).

Li et al discloses all the claimed invention (see the rejection under 102 noted above) except for teaching the delay device comprising a controllably variable current inverter and inverter in chain as required by claims 32 and 33.

Heightley discloses in figures 2 and 4 a delay line comprising inverters in chain wherein each inverter is a controllable variable current inverter as required by the claims.

It would have been obvious to one skilled in the art at the time the invention was made to incorporate the teaching of Heightley into that of Li et al since Li et al discloses that his invention is not limited by the particular embodiments or implementations described in his specification.

A skilled artisan in the art would be motivated to implement Heightley's teaching since his delay line provides the accurate preservation of the width of pulses propagated through relatively long delay lines.

As to claims 37-38, the scopes of these claims are similar to that of claims 32 and 33, respectively. Therefore, they are rejected for the same reasons set forth above.

***Allowable Subject Matter***

6. Claims 15, 16, 19-22, 25-26 and 28 are allowed.
7. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose an apparatus and method thereof comprising element being configured or functioned as recited in claim. Specifically, none of the prior art teaches or fairly suggests, among other things, the limitation “*time delaying the further delayed external clock signal by an amount of time equal to the receiver time delay plus the driver time delay*” as recited in claims.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Art Unit: 2816

Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 571-272-1746. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

An T. Luu  
7-20-05 



TIMOTHY P. CALLAHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800